

REMARKS

Claims 20-42, and 71-76 are pending in this application. Claims 1-19 and 43-70 were previously withdrawn from prosecution in this application and have been cancelled. Applicant reserves the right to pursue the subject matter of the cancelled claims in a subsequent continuation patent application.

Interview Summary

Applicant acknowledges with appreciation the courtesy extended by the Examiner during a telephone interview with the Applicant's attorney of record on June 26, 2008. In accordance with MPEP § 713.04, Applicant summarizes herewith the details of the interview with the Examiner.

During the interview, the support for and enablement of the pending claims was discussed, with particular attention directed to independent claims 20 and 42. Applicant identified specific support for and enabling disclosure of "distributing the plurality of pre-cut fibers in a fluidized stream" within the specification of the present application. For example, Applicant pointed to the definition of the term "fluidized" found in paragraph 49 and to the enabling description found in paragraphs 84 and 86 of the application as published. The Examiner acknowledged that the feature of "distributing the plurality of pre-cut fibers in a fluidized stream" was supported and enabled by the application, and that the previous rejections under 35 U.S.C. § 112 would be withdrawn.

Additionally, during the interview, the subject matter of the pending claims was discussed, with particular attention directed to the subject matter of independent claims 20 and 42 in comparison with that of the prior art cited in the Office Action. For example, Applicant noted that the prior art relied upon by the Examiner does not disclose, among other things, distributing a plurality of pre-cut fibers in a fluidized stream. Rather, U.S. Patent 3,765,922 specifies a centrifugal extruder to form and eject filaments to impinge a base. Indeed, the filaments are ejected with sufficient centrifugal force to overcome a transverse air flow used to form a bubble in the base tube. Per the request of the Examiner, the grounds of distinction are

set forth in detail below. The Examiner indicated that he would consider these grounds when filed in a response to the Office Action. No models were demonstrated during the interview.

Claim Rejections Under 35 U.S.C. § 112, first and second paragraphs

In the Non-Final Office Action dated April 14, 2008, the Examiner rejected claims 20-42, and 71-76 under 35 U.S.C. § 112, first and second paragraphs as allegedly failing to comply with the enablement requirement, and being indefinite, respectively. Specifically, the Examiner stated that “distributing the plurality of pre-cut fibers in a fluidized stream inside of the film bubble” as recited in independent claims 20 and 42 was not disclosed or explained clearly in the filed disclosure and that it was not clear how the step of distributing in a fluidized stream would take place.

As detailed herein above, Applicant and the Examiner conducted a telephone interview on June 26, 2008, wherein Applicant identified exemplary language in the present application that supports and enables the claims. The Examiner acknowledged and agreed that such language did indeed support and enable the claimed features.

For purpose of convenience, Applicant again respectfully notes paragraph 49 of the present application as published, which states “[i]t is desirable for the plurality of fibers to be sized appropriately to keep the fibers fluidized with the air flow. The term ‘fluidized’ used as defined herein is the random movement of the solid particles formed by transporting the solid fiber particles that acts like a fluid.”

Furthermore, Applicant notes that, as stated in paragraph 84 of the present application as published, “[o]nce the fibers are separated, they may be fluidized in an air stream.” Paragraph 84 additionally states that in order to fluidize the fibers in an air stream a “fiber-distribution apparatus” may be used and that “[o]ne example of a commercially available fiber-distribution apparatus is the vertical fine opener that is manufactured by Fiber Controls Corporation of Gastonia, N.C.”

Additionally, Applicant submits that, as stated in paragraph 86 of the present application as published, “the plurality of fibers may be distributed by, for example, an air conveying system that blows the plurality of fibers.”

In view of the above and the telephone interview of June 26, 2008, Applicant respectfully submits that the disclosure of the present application as filed clearly and distinctly describes and enables “distributing the plurality of pre-cut fibers in a fluidized stream inside of the film bubble.”

For at least these reasons, and in accordance with the Examiner’s agreement on the subject in the telephone interview of June 26, 2008, Applicant respectfully requests withdrawal of the rejections of claims 20-42 and 71-76 under 35 U.S.C. § 112, first and second paragraphs.

Claim Rejections Under 35 U.S.C. § 103(a)

In the Non-Final Office Action dated April 14, 2008, the Examiner rejected claims 20-42, and 71-76 under 35 U.S.C. § 103(a) as being unpatentable over Schrenk (U.S. Patent No. 3,589,958) in view of Chisholm (U.S. Patent No. 3,765,922), for the reasons set forth on pages 3-7 of the Office Action. Briefly, the Examiner contends that Schrenk discloses all of the limitations of independent claims 20 and 42, except the Examiner concedes that Schrenk does not disclose the steps of forming a forming body panels and closing the body panels to form a bag. Additionally, the Examiner acknowledges that Schrenk does not disclose providing fibers in a pre-cut form and that Schrenk does not disclose distributing the plurality of pre-cut fibers in a “fluidized stream.”

The Examiner relies upon Chisholm as allegedly disclosing a method similar to that of Schrenk but including providing a plurality of pre-cut fibers and distributing the pre-cut fibers in a fluidized stream. The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of making a fiber web of Schrenk by substituting the filament of Schrenk with pre-cut fibers as allegedly suggested by Chisholm and further distributing the pre-cut fibers by fluidizing the fibers in a fluidized stream

also as allegedly suggested by Chisholm, in order to easily control the desired thickness of the web.

Applicant respectfully traverses the rejections and submits that neither Schrenk nor Chisholm, alone or in combination, discloses or suggests the claimed blown-film process for making a fiber-reinforced bag as recited in independent claims 20 and 42.

“To establish a *prima facie* case of obviousness ... there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations.” MPEP § 2143.

At a minimum, Applicant respectfully submits that neither Schrenk nor Chisholm, alone or in combination, is even directed to a process of making a bag, let alone discloses all of the features of the claimed invention. Particularly, Applicant respectfully submits that neither Schrenk nor Chisholm, alone or in combination, discloses or suggests distributing a plurality of pre-cut fibers in a fluidized stream inside of a film bubble as recited in independent claims 20 and 42.

Independent claims 20 and 42 recite blown-film processes for making a fiber-reinforced bag including, among other things, the steps of providing and melting at least one thermoplastic resin, extruding the resin through a die to form a film bubble, providing pre-cut fibers, and distributing the plurality of pre-cut fibers in a fluidized stream inside of the bubble. As recited in independent claims 20 and 42, the film bubble is collapsed after distributing the fibers therein so as to form a fiber-reinforced film. As recited by independent claims 20 and 42, the process further includes forming first and second body panels from the fiber-reinforced film and closing those panels along two opposite sides and a bottom to form a fiber-reinforced bag.

Independent claim 42 additionally recites that the thermoplastic resin be selected from polyolefins, polyesters, nylons, alkenyl aromatic polymers, polyvinyl chlorides, and combinations of those polymers. Independent claim 42 also recites that the process includes that

the plurality of pre-cut fibers are electrically charged to assist in improving the affinity of the fibers to the film bubble.

Applicant respectfully submits that neither Schrenk nor Chisholm, alone or in combination, discloses or suggests the key features of the claimed blown-film process for making a fiber-reinforced bag as recited in independent claims 20 and 42.

For example, neither Schrenk nor Chisholm disclose or suggest distributing a plurality of pre-cut fibers in a fluidized stream inside a film bubble as recited in independent claims 20 and 42. As described in the present application, for example at paragraphs 84-86, the fibers are separated and fluidized, for example in an air stream, in order to be placed in a roughly even distribution to result in a better reinforced film. In order to attain such a distribution, the specification notes that the fibers can be distributed by an “air conveying system that blows the plurality of fibers towards the inner surface of the film bubble or tube.” (See paragraph 86).

Indeed, the Examiner even acknowledges and concedes that Schrenk does not disclose such a feature. Rather, Schrenk discloses a spinning extruder that deposits a filament or filaments onto the inner surface of a film bubble by the centrifugal force created by the spinning extruder. Similarly, Chisholm discloses that “[t]he strands or filaments 19 are formed by centrifugal extrusion in a centrifugal extruder 15 ... [and] [i]n order to achieve full width coverage of the strands or filaments 19 on the base 14, the centrifugal extruder 15 is traversed from one side to the other of the base 14.” (See Chisholm, col. 4, lines 7-14). Applicant respectfully submits that neither Schrenk nor Chisholm disclose or suggest distributing a plurality of pre-cut fibers in a fluidized stream inside of the film bubble as recited in independent claims 20 and 42 of the present application.

During the telephone interview of June 26, 2008, the Examiner pointed to Chisholm, Figure 3 as showing the use of blown air to aid in distributing fibers to the tube and stated that the inclusion of blown air “make[s] it fluidized.” As stated during the interview, Applicant respectfully disagrees and submits that Chisholm specifies that “[a]s shown in FIG. 3, air is introduced through the extrusion head 33 to form a bubble in the advance base tube 34.” (emphasis added, col. 4, lines 33-35). By contrast, Chisholm states that “rapidly moving strands

or filaments ... are impinged on the inside surface of the base tube 34. The strands or filaments 31 are formed by a centrifugal extruder.” (col. 4, lines 37-40). Applicant respectfully submits that, according to Fig. 3 of Chisholm, the air that is required to form a bubble is introduced in a direction perpendicular to the direction in which the centrifugal extrusion of strands or filaments are rapidly fired towards the inner surface of the bubble. Therefore, Applicant respectfully submits that, contrary to the use of a fluidized stream to distribute fibers, the force in which the filaments are ejected from the centrifugal extruder must overcome the perpendicular air flow specified by Chisholm.

Additionally, Applicant submits that, as noted by the Examiner, Schrenk does not disclose or suggest introducing a plurality of *pre-cut* fibers inside of a film bubble. Rather, Schrenk discloses dispensing a filament which may be severed into shorter lengths as it is dispensed. This results in a serial dispensing of fibers and not introduction of a plurality of pre-cut fibers. The Examiner relies upon Chisholm as disclosing introduction of a plurality of pre-cut fibers and cites to FIGS. 1 and 3 of Chisholm. However, Applicant respectfully submits that, as discussed above, FIGS. 1 and 3 of Chisholm disclose that “[t]he strands or filaments 19 are formed by centrifugal extrusion in a centrifugal extruder 15 ... and freed therefrom by a knife 20.” (See Chisholm, col. 4, lines 7-10).

Finally, and as acknowledged by the Examiner, Schrenk and Chisholm do not disclose the steps of forming a first and second body panel from the fiber reinforced film; nor closing the first and second body panels along two opposing sides or folding the film to form one of the opposing sides of the bag nor folding the web to form a bottom to form the fiber-reinforced bag. See page 4 of the Office Action. The Examiner therefore relies upon official notice that such steps of forming bags are old, well known, and available in the art and that it would have been obvious to one of skill in the art at the time of the invention to modify the combined process of Schrenk and Chisholm in order to form a fiber-reinforced bag.

In accordance with MPEP § 2144.03, Applicant respectfully traverses the Examiner’s official notice that steps of forming fiber reinforced bags are old, well known, and available in the art. Applicant respectfully submits that, according to MPEP § 2144.03 “assertions of specific

knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art.” Applicant respectfully submits that, according to MPEP § 2144.03, following a traversal of an Examiner’s assertion of official notice “the examiner must provide documentary evidence in the next Office Action if the rejection is to be maintained.”

Applicant therefore respectfully submits that neither Schrenk nor Chisholm, alone or in combination, disclose or suggest each and every feature of the process as recited in independent claims 20 and 42 of the present application.

Furthermore, and with respect to independent claim 42 and dependent claim 32, the Examiner additionally acknowledges that neither Schrenk nor Chisholm discloses that the fibers are electrically charged. The Examiner takes “official notice” that electrically charging fibers to increase their affinity to a surface is well known in the art and that it would have been obvious to one of skill in the art at the time of the invention to have modified Schrenk’s process by electrically charging fibers in order to improve quality and toughness.

In accordance with MPEP § 2144.03, Applicant respectfully traverses the Examiner’s assertion of official notice that electrically charging pre-cut fibers to increase their affinity to a thermoplastic film for a fiber-reinforced bag, is old and well-known in the art. Applicant respectfully submits that, according to MPEP § 2144.03 “assertions of specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art.” Applicant respectfully submits that, according to MPEP § 2144.03, following a traversal of an Examiner’s assertion of official notice “the examiner must provide documentary evidence in the next Office Action if the rejection is to be maintained.”

Additionally, Applicant respectfully submits that neither Schrenk nor Chisholm provides motivation to modify the process of Schrenk to arrive at the invention as claimed. The system of Chisholm is directed to solving the problem of increasing adhesion of flocking filaments to a substrate and minimizing the wasted flocking material. This is of particular use with regard to conventional flock articles such as carpets and other fabrics. There is no suggestion of or

motivation for using the system and method of Chisholm for purposes of making fiber-reinforced bags.

Without such motivation, Applicant respectfully submits that the claimed invention is not obvious based upon Schrenk in view of Chisholm. For at least this reason, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness under 35 U.S.C. § 103(a). However, even assuming *arguendo* that motivation to combine the references were found in Chisholm, Applicant respectfully submits that, as discussed above, Schrenk, alone or in combination with Chisholm, would still not disclose or suggest all of the claimed features of the pending claims.

Applicant further submits that the pending claims are not obvious over the prior art in accordance with *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727, L.Ed.2d 705. Under *KSR*, the combination of prior art elements is required to provide predictable results to support a finding of obviousness. Applicant submits that, even if all of the claim features were disclosed in Schrenk and Chisholm, there is no suggestion or indication that combining the references would yield predictable results. As discussed above, the system of Chisholm is drawn to solving the problem of increasing adhesion of flocking filaments to a substrate and minimizing the wasted flocking material. This is of particular use with regard to conventional flock articles such as carpets and other fabrics.

The pending claims are directed to a blown-film process for making a fiber-reinforced bag. Preferably, the fiber-reinforced bag has desirably high tear strength, tensile strength, and puncture-resistant properties. As disclosed in the pending application; it is desirable that, in order to attain such properties, the fibers in the instant application are placed in a roughly even and random distribution, which is affected by distributing the fibers in a fluidized stream. Applicant respectfully submits that both Schrenk and Chisholm incorporate centrifugal extrusion of fibers which would introduce fibers in a generally oriented manner. Indeed, Applicant submits that one of ordinary skill in the art would not combine Schrenk and Chisholm because, among other things, the results of combining Schrenk's method of making a fiber web with Chisholm's method of flocking a substrate would not be predictable.

In view of the above, Applicant respectfully submits that a person having ordinary skill in the art could not have combined the disclosures of Schrenk and Chisholm in such a way that encompassed the rejected claims, nor would the benefits or results have been predictable.

For at least these reasons, Applicant submits that the Examiner has not met the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

Therefore, Applicant respectfully submits that independent claims 20 and 42 are in condition for allowance. Claims 21-41, 71, 73, and 75 depend from claim 20 and are in condition for allowance. Claims 72, 74, and 76 depend from claim 42 and are in condition for allowance.

Dependent Claims

Applicant respectfully submits that claims 21-41, 71, 73, and 75 depend from independent claim 20 and are in condition for allowance at least for the reasons discussed herein above. Likewise, Applicant respectfully submits that claims 72, 74, and 76 depend from independent claim 42 and are in condition for allowance at least for the reasons discussed herein above.

Furthermore, since the dependent claims disclose additional features not disclosed by Schrenk or Chisholm taken alone or in combination, Applicant submits that claims 21-41 and 71-76 are non-obvious based upon Schrenk in view of Chisholm. For example, claims 21-23 feature particular steps to form a bag from fiber-reinforced film; claims 24-26 feature particular polymers and blends of polymers for the thermoplastic resin; claims 27-30 feature particular dimensions for the film; claim 31 features a particular type of extension die; claim 32 features electrically charging the fibers; claims 33 and 34 feature the fibers adhering to an inner surface of the bubble; claims 35 and 36 feature particular extruders; claims 37-41 feature particular materials and properties of the fibers; and claims 71 and 72 feature a fiber layer thick such that the first and second thermoplastic layers are substantially not in contact. New claims 73 and 74 feature that the plurality of fibers are dispersed in a randomized pattern. New claims 75 and 76

feature electrically charging the film bubble to increase the affinity of the pre-cut fibers to the inside of the film bubble.

In particular, Applicant respectfully submits that neither Schrenk nor Chisholm discloses or suggests the plurality of the fibers being electrically charged to assist in improving the affinity of the plurality of fibers to the film bubble as recited by dependent claims 32, 75, and 76. Furthermore, Applicant submits that it would not have been obvious to one of skill in the art to modify Schrenk or Chisholm to include charging the fibers because both Schrenk and Chisholm employ centrifugal extruders that throw fibers or filaments directly towards the film surface as opposed to fluidizing the fibers as disclosed in the present application.

In view of the above, Applicant respectfully submits that a person having ordinary skill in the art could not have combined the disclosures of Schrenk and Chisholm in such a way that encompassed the rejected claim, nor would the benefits or results have been predictable.

Applicant respectfully submits that dependent claims 32, 75, and 76 are allowable over Schrenk and Chisholm either alone or in combination.

Additionally, Applicant respectfully submits that neither Schrenk nor Chisholm discloses or suggests disposing the plurality of fibers in a fiber layer such that the first thermoplastic layer and the second thermoplastic layer are substantially not in contact as recited by dependent claims 71 and 72. Applicant respectfully submits that because Schrenk employs a centrifugal extruder, which deposits a filament or filaments on the inner surface of a film bubble in a serial manner, it would not be possible to deposit sufficient fiber on the inner surface of the film bubble in order to create a fiber layer such that the first and second thermoplastic layers are substantially not in contact. Additionally, Chisholm does not disclose or suggest a second thermoplastic layer. Rather, in Chisholm, fibers are distributed on a film surface by a centrifugal extruder and the film bubble is then "slit longitudinally to appear therefrom as a conventional web-like material." (See Chisholm, col. 5, lines 4-5).

In view of the above, Applicant respectfully submits that a person having ordinary skill in the art could not have combined the disclosures of Schrenk and Chisholm in such a way that encompassed the rejected claims, nor would the benefits or results have been predictable.

Applicant respectfully submits that dependent claims 71 and 72 are allowable over Schrenk and Chisholm either alone or in combination.

Also, claims 73 and 74 would not have been obvious over Schrenk and Chisholm, alone or in combination. For example, the centrifugal distribution of filaments relied upon by Schrenk and Chisholm would inherently result in uniform placement rather than a randomized pattern (See FIGS. 4-6 of Chisholm). As such, Applicant respectfully submits that a person having ordinary skill in the art could not have combined the disclosures of Schenk and Chisholm in such a way that encompassed the rejected claims, nor would the benefits or results have been predictable.

Formal Request for Interview

Applicant submits that the present application is in condition for allowance at least for the reasons set forth herein. If the present application is not considered to be in condition for allowance by the Examiner, Applicant requests an interview with the Examiner prior to the next Office Action to discuss the present application and the prior art of record. Applicant's Attorney Daniel J. Hulseberg may be reached at telephone number (212) 408-2594 to schedule a mutually convenient date and time and to provide assistance or additional information as required.

CONCLUSION

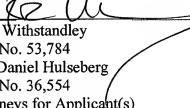
On the basis of the foregoing Remarks, Applicant respectfully submits that the pending claims of the present application are allowable over the prior art of record. Applicant thus respectfully requests that the rejections of the pending claims be withdrawn.

The Examiner is invited to contact the undersigned at (212) 408-2500 if any additional information or assistance is required.

Applicant authorizes the Commissioner to charge any fees (including fees for extra claims) and/or credit any overpayments associated with this paper to Baker Botts L.L.P. Deposit Account No. 02-4377, Ref. No. 077409.0455. Further, if a fee is required for an extension of time under 37 C.F.R. § 1.136 not provided for above, Applicant requests such extension and authorizes the charging of the extension fee to Baker Botts L.L.P. Deposit Account No. 02-4377, Ref. No. 077409.0455.

Respectfully submitted,

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